6 | CONCLUSION

The preceding chapters examine many of the key attributes of the Hatfield Model, not only in isolation, but also as they compare with the BCM2. This chapter summarizes our major findings and recommendations.

- Because the Hatfield Model does not presently include ICO territory, it cannot be readily used to size high cost funding support.

- Neither the Hatfield Model nor the BCM2 are fully open. The Hatfield Model, like the BCM2, "locks" cells in algorithmic areas of several worksheets. This seemingly unnecessary locking of cells frustrates efforts at developing a comprehensive and objective analysis of the cost proxy model. There is no apparent reason for locking *any* cells of a *public* cost proxy model.

- The fact that the Hatfield Model allows users to specify major cost drivers of the carrying charge factor (e.g., the cost of debt, the cost of equity, and depreciation lives) is a significant strength of the model. By contrast, policy makers cannot readily change the critical components of the three investment-related cost factors in the BCM2.

- The default rate of return in the Hatfield Model, i.e., 10.01%, is a more realistic number than that implicitly incorporated in the BCM2, i.e., 11.25%.

- A preliminary comparison of the overhead factor in the Hatfield Model and the non-plant-related expense factor in the BCM2 suggests that the Hatfield Model more accurately reflects forward-looking costs associated with primary basic local exchange service. As we stated in the August Report, the $8.34 per month for non-plant-related expense factors that is included in the BCM2's computation of basic local exchange service should be rejected until and unless the BCM2 Sponsors can provide comprehensive documentation.

- Although the original BCM and Hatfield Model switching costs diverged greatly, the switching costs that are modelled by the current release of the Hatfield Model are very similar to those that are modelled by the current release of the BCM2. There are two main weaknesses of the Hatfield Model relative to the BCM2: (1) the digital switch discount is "hardwired" in the model and thus cannot be readily changed by a user and, (2) the Hatfield Model does not allow a user to cost out the switch component of basic local exchange service utilizing remote switches beyond their existing deployment. The Hatfield Model's switching module is substantially more comprehensive and detailed than that in the BCM2, but it is unclear whether this level of detail is necessary for sizing a USF.

- The Hatfield Model more accurately reflects applicable outside plant categories: the model includes aerial, buried, and underground plant while the BCM2 only includes two categories: aerial and underground. This is an area that merits further analysis in order to determine the magnitude of the impact of this difference in the size of the USF computed by the two models.

- The fact that the Hatfield Model computes high cost support at the CBG level rather than at the wire center level results in an overstatement of the USF.

- The Hatfield Model also does not fully reflect the economies of scale and scope that the ILECs enjoy because the model fails to flow back to the cost of primary basic residential service, a reasonable share of the differential between (1) the sum of the costs of a stand-alone network designed to serve only primary residential lines and a stand-alone network designed to support all services *other than* the initial residential line and (2) the cost of a combined network.

- The Hatfield Model, because it mirrors the original BCM in its assumption that households are uniformly distributed throughout each CBG, overstates the distribution plant requirement for large, sparsely populated CBGs in which households are more likely to be clustered together than spread evenly throughout a large area. The Sponsors of the BCM2 addressed this criticism by incorporating a third party database that reduced the area of CBGs with fewer than 20 households to the territory 500 feet on either side of the CBG's road network. The Hatfield Model does not yet include a similar adjustment. The incorporation of such a refinement would lower the cost.

- By making various modifications to the Hatfield Model and to the BCM2 we are able to explain much of the difference in the results of the two models. However, the cross-comparison that is discussed in Chapter 5 does not reflect (1) equal quantities of distribution legs; (2) similar classification of plant within the buried

plant and underground plant categories; and (3) reconciliation of structure and placement costs.

- The Hatfield Model, like the BCM2, does not account for the approximate 5% of customers for whom facilities are made available but who do not subscribe to service and thus do not contribute any revenue to the operation and maintenance of the network. ETI first raised this point in our April Report with respect to the BCM and we continue to believe that a "penetration rate adjustment" should be incorporated into any cost proxy model to more accurately reflect the cost of achieving national universal service goals. The Sponsors of the BCM2 were asked by the Federal-State Joint Board on Universal Service to address the feasibility and advisability of a number of ETI recommendations including an adjustment to reflect penetration rates. Unfortunately, the Sponsors did not address the penetration rate adjustment in their response to the Joint Board's questions.[76]

In conclusion, the Joint Board and the FCC should gather industry input on the key design aspects, operational attributes, and default values in any cost proxy model that they are considering using for the purpose of sizing and distributing a universal service fund. In this report, we have identified the major characteristics of the Hatfield Model and the BCM2 that merit particular scrutiny, and, in many instances, we have offered affirmative recommendations on those decisions that regulators ultimately must make, regardless of the model selected. Furthermore, we have identified, where feasible, the major explanations of the substantially different results yielded by these two models. This report, along with ETI's April, May, and August Reports, is intended to assist the Joint Board and the FCC in adopting a competitively neutral, economically efficient, and open cost proxy model that will further the goal of universal service.

76. *Op. cit.*, footnote 8, at 3.